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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,970	12/21/2004	Marcel Inauen	H58-040 US	2990
21706	7590	12/30/2005	EXAMINER BAUER, SCOTT ALLEN	
NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/518,970	Applicant(s) INAUEN, MARCEL	
	Examiner Scott Bauer	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/13/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2. Claim 1 is objected to because of the following informalities: Claim 1 fails to set forth the subject matter that applicant(s) regard as their invention. Lines 7 & 8 are written in such a way so that the meaning of the phrase is unclear. It is suggested that the lines be rewritten so as to better define the physical orientation of the two short circuit lines (5 & 6). Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 & 8-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ammann (PCT/CH01/000617).

5. With regard to Claim 1, Ammann, in Figure 1, discloses an interference suppression filter and lightning current diverter device (1) in a coaxial line for the transmission of high-frequency signals, comprising a housing (2) with two connectors (7, 8), the housing (2) forming an outer conductor (4) connected to ground, and an inner

conductor (3) guided through the housing (2) as well as a connection (5, 6) between inner conductor (3) and housing (2) (column 1 lines 1-10), characterized in that the connection comprises at least one pair of two lines (5, 6), these two lines (5, 6) are disposed at least partially approximately parallel and overlapping with respect to one another, the two lines (5, 6) are insulated against one another (column 3 lines 61-63), both lines (5, 6) comprise at one of their two ends (10, 11) a contact element (25 & 26) with respect to the inner conductor (3) and at the other end (14, 15) each a contact element (17) with respect to the housing (2) and these contact elements (17, 25 & 26) of the two lines (5, 6) are disposed such that the directions of flow of the currents in the parallel regions of the two lines (5, 6) are directed counter one another.

6. With regard to Claim 2, Amman, in Figure 2, teaches an interference suppression filter and lightning current diverter device as claimed in claim 1, characterized in that the lines (5, 6) are disposed approximately parallel to the inner conductor (3) and on a cylindrical surface concentric with the inner conductor (3), the two contact elements (25, 26) of the two lines (5, 6) connected with the inner conductor (3) are disposed spaced apart from one another in the direction of the longitudinal axis (9) of the inner conductor (3), and the two lines (5, 6), starting from these contact elements (25, 26), are directed counter to one another.

7. With regard to Claim 3, Ammann, in Figure 2, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1,

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characterized in that the housing (2) includes a cylindrical core hollow space (20) and the inner conductor (3) and the lines (5, 6) are disposed at a spacing from one another in this core hollow space (20). Ammann discloses that between the housing (2) and the disk contact (26), inner connector (3) and shunt lines (5 & 6) a dielectric region, which is air, is disposed.

8. With regard to Claim 8, Ammann discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that the two lines (5 & 6) are electrically elongated $\lambda/4$ short circuit lines.

9. With regard to Claim 9, Amman discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that each line (5 & 6) comprises a capacitance and an inductance forming a parallel resonance circuit.

10. With regard to Claim 10, Ammann, in Figure 4, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that in the proximity of the two contact elements (25 & 26) between the inner conductor (3) and the two lines (5 & 6) on the inner conductor (3) one capacitance each (30 & 31) is implemented and the inner conductor (3) comprises between the two connections (7, 8) a further capacitance (34) and at least one inductance (32 & 33).

11. With regard to Claim 11, Ammann, in Figure 5, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that at the output side (18) of the device on the inner conductor (3) a capacitor (37) is disposed.

12. With regard to Claim 12, Ammann, in Figure 6, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that between the ends (14, 15) of the two lines (5 & 6), with the contact elements (16) with respect to the housing (2), one capacitor (40) in parallel with it one additional pulse-diverting element (39) each is interconnected.

13. With regard to Claim 13, Ammann discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that the lines (5 & 6) and the contact element (17) form different line sections and determine the bandwidth and the frequency range of the HF transmission.

14. With regard to Claim 14, Ammann, in Figure 1, discloses the interference suppression filter and lightning current diverter device as claimed in claim 1, characterized in that the inner conductor (3) comprises different line sections and these and the dielectric about this inner conductor (3) determine the characteristic over the bandwidth of the HF transmission.

15. With regard to Claim 15, Ammann, in Figure 1, discloses the interference suppression filter and lightning current diverter device as claimed in claim 1, characterized in that two lines (5 & 6) each are combined to form a pair, and several pairs of lines (5 & 6) are installed between inner conductor (3) and housing (2).

16. With regard to Claim 16, Amman, in Figure 6, discloses the interference suppression filter and lightning current diverter device as claimed in claim 12, characterized in that the pulse-diverting element (39) is a gas discharge diverter or a varistor or a diode and across this pulse-diverting element (39) and the capacitor (40) a DC feed (38) is disposed.

17. With regard to Claim 17, Ammann, in Figure 1, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that the inner conductor (3) separates the two lines (5 & 6) as well as the housing (2) from one another through dielectrics (20, 23 & 27).

18. With regard to Claim 18, Ammann, in Figure 1, discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1, characterized in that, with the exception of the contact element (17), at the ends of the two lines (5 & 6) all effective structural elements are disposed concentrically to the longitudinal axis (9) of the inner conductor (3) or of the device (1) or parallel to this longitudinal axis (9).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ammann as applied to claim 1 above, and further in view of Landinger et al. (US 6529357).

21. With regard to Claim 4, Ammann teaches the interface suppression filter and lightning current diverter of Claim 1.

Ammann does not teach the housing of the device includes a cylindrical core hollow space or that the hollow space contains the inner conductor and the shunt lines.

Landinger et al., in Figure 1, teaches a coaxial over-voltage protector characterized in that the housing (2) includes a cylindrical core hollow space, in this core hollow space is guided the inner conductor (1), in the housing (2) an additional hollow space (4) extending approximately parallel to the core hollow space is disposed and the line (10b) is guided individually in this additional hollow space (4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ammann with Landinger et al., by placing the inner connector of Ammann in the hollow taught by Landinger et al. and to

place the two shunt lines (5 & 6) taught by Ammann in the additional hollow space (4) taught by Landinger et al. The device taught by Ammann in view of Landinger et al. contains two inner conductor portions (10a) taught by Landinger et al. and meet with each end of the shunt lines (5 & 6) taught by Ammann, which is contained in the hollow (4) taught by Landinger et al. The connector (17) extends to the conductive housing 7 of Landinger et al. Ammann would be combined with Landinger et al. for the purpose of providing the device taught by Ammann with a cheaper housing which is simple in structure and thus more cost effective to build (Landing column 1 lines 45-47).

22. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ammann and further in view of Tellas (US 5982602).

23. With regard to Claim 5, Amman teaches the interference suppression filter and lightning current diverter device as claimed in Claim 1.

Ammann does not teach that the contacts are disposed in a radial plane and extend concentrically in a right angle with the inner conductor.

Tellas, in Figure 4, teaches a surge protector connector characterized in that a shunt line (40) is disposed in a radial plane and extends concentrically with the inner conductor (32), the plane is disposed approximately at a right angle to the inner conductor (32) and that at one end the line is directed inwardly. Ammann further teaches that the contact element, with respect to the housing (28) at the other ends of line (40) approximately radially outwardly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ammann with Tellas et al., by placing two curvilinear stubs taught by Tellas, in the surge protector connector and arranging them in such a way that the current through the stubs travel in an opposite direction in respect to each other as taught by Ammann. This would be done for the purpose of providing a surge protection circuit which provide a means to partially cancel the fault voltage through the induction effect as taught by Ammann (column 2 lines 11-18) and also increases the bandwidth of the device as taught by Tellas (column 2 lines 28-32), thus making the protector available for a wider range of applications.

24. With regard to Claim 6, Ammann in view of Tellas et al. discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1. Ammann further teaches that the two shunt lines are approximately parallel to each other in a common surface, this surface extending at a spacing to the inner conductor.

Tellas et al. further discloses that a shunt line is concentrically or parallel tangentially to the inner conductor, the contact element at one end of the line is directed approximately radially toward the inner conductor and is connected with it, and the contact elements at the other ends of the line is connected with the housing. The motivation to combine these devices is given above.

25. With regard to Claim 7, Ammann in view of Tellas et al. discloses the interference suppression filter and lightning current diverter device as claimed in Claim 1. Tellas et

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al. further that the curvilinear stub (40) between inner conductor (32) and housing (28) can be a quarter wavelength short circuit line (column 5 lines 30-34).

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB



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